

WHAT IS CLAIMED IS:

1. A process cartridge detachably mountable to a main body of an electrophotographic image forming apparatus having a guide member, comprising:

a cartridge frame;

an electrophotographic photosensitive drum;

process means acting on the electrophotographic photosensitive drum; and

a projecting portion which is provided in the cartridge frame and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, is guided to the guide member to guide the process cartridge in a mounting direction in which the process cartridge is mounted to the main body of the electrophotographic image forming apparatus,

wherein, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is conformable in functions of the process cartridge, the projecting portion allows the process cartridge to insert the main body of the electrophotographic image forming apparatus and, when the process cartridge is mounted to a main body of an electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, the projecting portion abuts against a main body frame provided in the main body of the electrophotographic image forming apparatus having different functions to prevent mounting of the process cartridge.

2. A process cartridge according to claim 1,
wherein the projecting portion comprises:

a first projecting portion which is provided on one end side of the cartridge frame in a longitudinal direction of the process cartridge and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus , abuts against the guide member; and

a second projecting portion which is provided on the other end side of the cartridge frame in the longitudinal direction and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, abuts against the guide member, and

when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, at least one of the first projecting portion and the second projecting portion abuts against the main body frame provided in the main body of the electrophotographic image forming apparatus having different functions to prevent the process cartridge from being mounted thereto.

3. A process cartridge according to claim 1 or 2,

wherein the projecting portion is provided so as to project downward from the cartridge frame when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus.

4. A process cartridge according claim 2,

wherein one of the first projecting portion and the second projecting portion is provided on an outer side in the longitudinal direction of a leg portion provided in the cartridge frame in order to support the process cartridge when the process cartridge is mounted on a mounting surface.

5. An electrophotographic image forming apparatus for forming an image on a recording medium, therein a process cartridge is detachably mountable to a main body of the electrophotographic image forming apparatus, the electrophotographic image forming apparatus, comprising:

(i) a guide member;

(ii) mounting means for detachably mounting the process cartridge, the process cartridge comprising: a cartridge frame; an electrophotographic photosensitive drum; process means acting on the electrophotographic photosensitive drum; and a projecting portion which is provided in the cartridge frame and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, is guided to the guide member to guide the process cartridge in a mounting direction in which the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, wherein: when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is conformable in functions of the process cartridge, the projecting portion allows the process cartridge to insert the main body of the

electrophotographic image forming apparatus and, when the process cartridge is mounted to a main body of an electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, the projecting portion abuts against a main body frame provided in the main body of the electrophotographic image forming apparatus having different functions to prevent mounting of the process cartridge; and

(iii) conveying means which conveys the recording medium.

6. An electrophotographic image forming apparatus according to claim 5,

wherein the electrophotographic image forming apparatus is different from the electrophotographic image forming apparatus having different functions in a speed for forming an image on the recording medium.

7. A process cartridge mounting system which detachably mounts a process cartridge to an electrophotographic image forming apparatus,

wherein a main body of the electrophotographic image forming apparatus comprises a guide member,

the process cartridge comprises:

a cartridge frame;

an electrophotographic photosensitive drum;

process means acting on the electrophotographic photosensitive drum; and

a projecting portion which is provided in the cartridge frame

and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, is guided to the guide member to guide the process cartridge in a mounting direction in which the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, wherein: when the process cartridge is mounted to a main body of an electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, the projecting portion abuts against a main body frame provided in the main body of the electrophotographic image forming apparatus having the different functions to prevent mounting of the process cartridge,

when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, the main body frame provided in the main body of the electrophotographic image forming apparatus having different functions and the projecting portion abuts against each other to prevent mounting of the process cartridge, and

when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is conformable in functions of the process cartridge, the projecting portion are guided in the mounting direction by the guide member, and the process cartridge is mounted to the main body of the electrophotographic image forming apparatus by mounting means.

8. A process cartridge mounting system according to claim

7,

wherein the projecting portion comprises:

a first projecting portion which is provided on one end side of the cartridge frame in a longitudinal direction of the process cartridge and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, abuts against the guide member; and

a second projecting portion which is provided on the other end side of the cartridge frame in the longitudinal direction and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, abuts against the guide member, and

when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, at least one of the first projecting portion and the second projecting portion abuts against the main body frame provided in the main body of the electrophotographic image forming apparatus having different functions to prevent the process cartridge from being mounted thereto.

9. A process cartridge mounting system according to claim 7 or 8,

wherein the projecting portion is provided so as to project downward from the cartridge frame when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus.

10. A process cartridge mounting system according to claim 7 or 8,

wherein the electrophotographic image forming apparatus is different from the electrophotographic image forming apparatus having different functions in a speed for forming an image on recording medium.

11. A process cartridge mounting system according claim 8, wherein one of the first and second projecting portions is provided on an outer side in the longitudinal direction of a leg portion provided in the cartridge frame in order to support the process cartridge when the process cartridge is mounted on a mounting surface.

12. A process cartridge detachably mountable to a main body an electrophotographic image forming apparatus having guide member, comprising:

a cartridge frame;

an electrophotographic photosensitive drum;

process means acting on the electrophotographic photosensitive drum; and

a projecting portion which is provided in the cartridge frame and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, is guided to the guide member to guide the process cartridge in a mounting direction in which the process cartridge is mounted to the main body of the

electrophotographic image forming apparatus, wherein: when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is conformable in functions of the process cartridge, the projecting portion allows the process cartridge to insert the main body of the electrophotographic image forming apparatus and, when the process cartridge is mounted to a main body of an electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, the projecting portion abuts against a main body frame provided in the main body of the electrophotographic image forming apparatus having different functions to prevent mounting of the process cartridge; the projecting portion comprises: a first projecting portion which is provided on one end side of the cartridge frame in an longitudinal direction of the process cartridge and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, abuts against the guide member; and a second projecting portion which is provided on the other end side of the cartridge frame in the longitudinal direction and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, abuts against the guide member, and when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, at least one of the first projecting portion and the second projecting portion abuts against the main body frame provided in the main body of the electrophotographic image forming apparatus having different

functions to prevent the process cartridge from being mounted thereto; and the projecting portion are provided so as to project downward from the cartridge frame when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus.

13. A process cartridge according claim 12,

wherein one of the first projecting portion and the second projecting portion is provided on an outer side in the longitudinal direction of a leg portion provided in the cartridge frame in order to support the process cartridge when the process cartridge is mounted on a mounting surface.

14. An electrophotographic image forming apparatus for forming an image on a recording medium, therein a process cartridge is detachably mountable to a main body of the electrophotographic image forming apparatus, the electrophotographic image forming apparatus, comprising:

(i) a guide member;

(ii) mounting means for detachably mounting the process cartridge, the process cartridge comprising: a cartridge frame; an electrophotographic photosensitive drum; process means acting on the electrophotographic photosensitive drum; and a projecting portion which is provided in the cartridge frame and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, is guided to the guide member to guide the process cartridge in a mounting direction in

which the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, wherein: when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is conformable in functions of the process cartridge, the projecting portion allows the process cartridge to insert the main body of the electrophotographic image forming apparatus and, when the process cartridge is mounted to a main body of an electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, the projecting portion abuts against a main body frame provided in the main body of the electrophotographic image forming apparatus having different functions to prevent mounting of the process cartridge; the projecting portion comprises: a first projecting portion which is provided on one end side of the cartridge frame in a longitudinal direction of the process cartridge and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, abuts against the guide member; and a second projecting portion which is provided on the other end side of the cartridge frame in the longitudinal direction and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, abuts against the guide member, and when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, at least one of the first projecting portion and the second projecting portion abuts against the main body frame provided in the main body of

the electrophotographic image forming apparatus having different functions to prevent the process cartridge from being mounted thereto; and the projecting portion is provided so as to project downward from the cartridge frame when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus; and

(iii) conveying means which conveys the recording medium.

15. A process cartridge mounting system which detachably mounts a process cartridge to an electrophotographic image forming apparatus,

wherein a main body of the electrophotographic image forming apparatus comprises a guide member,

the process cartridge comprises:

a cartridge frame;

an electrophotographic photosensitive drum;

process means acting on the electrophotographic photosensitive drum; and

a projecting portion which is provided in the cartridge frame and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, is guided to the guide member to guide the process cartridge in a mounting direction in which the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, wherein: when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is conformable in functions of the process cartridge, the projecting portion allows

the process cartridge to insert the main body of the electrophotographic image forming apparatus and, when the process cartridge is mounted to a main body of an electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, the projecting portion abuts against a main body frame provided in the main body of the electrophotographic image forming apparatus having different functions to prevent mounting of the process cartridge; the projecting portion comprises: a first projecting portion which is provided on one end side of the cartridge frame in an longitudinal direction of the process cartridge and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, abuts against the guide member; and a second projecting portion which is provided on the other end side of the cartridge frame in the longitudinal direction and, when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus, abuts against the guide member, and when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, at least one of the first projecting portion and the second projecting portion abuts against the main body frame provided in the main body of the electrophotographic image forming apparatus having different functions to prevent the process cartridge from being mounted thereto; and the projecting portion is provided so as to project downward from the cartridge frame when the process cartridge is mounted to the main body of the electrophotographic image forming

apparatus,

when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus which is unconformable in functions of the process cartridge and having different functions, the main body frame provided in the main body of the electrophotographic image forming apparatus having different functions and the projecting portion abuts against each other to prevent mounting of the process cartridge, and

when the process cartridge is mounted to the main body of the electrophotographic image forming apparatus having conformable functions of the process cartridge, the projecting portion is guided in the mounting direction by the guide member, and the process cartridge is mounted to the main body of the electrophotographic image forming apparatus by mounting means.

16. A process cartridge mounting system according claim 15, wherein one of the first and second projecting portions is provided on an outer side in the longitudinal direction of a leg portion provided in the cartridge frame in order to support the process cartridge when the process cartridge is mounted on a mounting surface.